

ABSTRACT

A method and system for designing an engine case static structure of a gas turbine engine including the step of creating signals representing an engine case static structure knowledge base of information. The knowledge base has a plurality of design rule signals with respect to a corresponding plurality of parameter signals of associated elements of an engine case static structure, wherein the knowledge base comprises at least one data value signal for each one of the plurality of design rule signals. The steps also include entering a desired data value signal for a selected one of the plurality of parameter signals of an associated element of the engine case static structure, and comparing the entered desired data value signal for the selected one of the plurality of parameter signals with the corresponding at least one data value signal in the knowledge base for the corresponding one of the plurality of design rule signals. Also included is the step of creating signals representative of a geometric representation of the selected one of the plurality of parameter signals of the associated element of the engine case static structure if the result of the step of comparing is such that the entered desired data value signal for the selected one of the plurality of parameter signals is determined to have a first predetermined relationship with respect to the corresponding at least one data value signal in the knowledge base for the selected one of the plurality of design rule signals.